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ABSTRACT

Field testing and evaluation of Project HEAR (Human Educational Awareness Resource) are reported in this document. The program described consists of Primary, Intermediate, and Secondary Learning Units (resource curriculum materials) which are non-sexist, ungraded, skill-building, student-centered, sequentially organized, and experiential. The stated purpose of the project is both to present students with meaningful and realistic exploration of the world of work and to remove myths and stereotypes from career choice. Curriculum materials were field tested over 3 years in 13 New Jersey school districts with approximately 3,000 students using the program. The project was validated in 1975 by a U.S. Office of Education Team as a program which has achieved statistically and educationally significant results in the attainment of its goals, proved cost effective, and is exportable. Conclusions reported were that Project HEAR had a significant effect in (1) changing stereotypical attitudes toward occupations, (2) increasing preferences for sex-asynchronic occupations for participating elementary school students, (3) increasing knowledge of the world of work for participating middle school students, and (4) increasing the consistency of occupational preference with interests for participating secondary school students. The three multimedia packaged learning units for each level and inservice training programs are described. (TA)

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Project HEAR

A UNIQUE PROGRAM IN CAREER(S) EDUCATION

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In Essence

Imagine the stillness of a pool of water, its surface suddenly broken by a falling stone. The ripples produced form ever widening concentric circles. In essence, Project HEAR (Human Educational Awareness Resource) is analogous to this.

The inner circle of this innovative 4-12th grade career education curriculum is the person, the HUMAN part of HEAR. All learning, all information, all change begins and ends with the human being.

The resource curriculum materials are designed to function as tools for each student. No matter how wide the concentric circles become, the core of HEAR's curriculum is first and foremost the individual. This is the heart and the innovation of the Project HEAR Primary, Intermediate and Secondary Learning Units.

Project HEAR materials are not designed to help people pick a job.

Project HEAR students are not educated for a career.

Students are not expected to be able to choose a life path for themselves as a result of their experiences with this curriculum.

Project HEAR materials ARE designed to offer students exposure to:

- the concepts of growth and change;
- the ingredients of self (needs, skills, strengths, aptitudes, feelings, motivations);
- a variety of work-related information and how this information relates to self;
- the art of choosing with practice in looking at alternatives and making decisions.

What it boils down to is a curriculum designed to help each student explore, without the judgment of success or failure, the world inside themselves (the inner circle) and move from there to successively widening exploration of the world outside themselves, a world they will enter upon leaving school.

Conceptually, Project HEAR is a blend of career education theory; human growth and development processes; sex stereotyping affect; and vocational choice psychology.

Project HEAR is a blend of the best and most diverse educational resources available within the limits of a prescribed curriculum intervention.

Project HEAR learning is experiential. Its materials encourage discussion, disagreement, questioning, participation, individualization, group process, and the acquisition of a set of skills -- skills which enable each person to get answers to questions about living: WHO AM I? WHAT IS WORK? WHAT ARE MY CHOICES? HOW DO I MAKE A DECISION?

In Practice

Project HEAR's materials are designed for use at the Primary (grades 4-6), Intermediate (grades 7-9) and Secondary (grades 10-12) levels. The approach in each learning unit, regardless of grade level, is the same. Learning begins with self, expands outside of self to include an exploration of the world of work, and concludes with experiences in choosing.

The developmental tasks at each learning level are the differences in each Project HEAR Learning Unit. Learning needs of 12th grade students are different from those of 8th and 4th grade students. Project HEAR addresses the needs of each learner indivi-

dually.

Since the WHOLE PERSON is the center of each Project HEAR learning unit, and since the WHOLE PERSON is limited by stereotypic life views, Project HEAR's three curriculum units focus on the exploration and implications of sex-role stereotyping.

In Reality

The problems concerning the limiting self concepts, occupational choices, and roles of women workers has in the past five years been identified and examined by the U. S. Department of Labor, the U. S. Office of Education, and many national publications. The significance of the programmtic effect upon both occupational perceptions and preferences of both males and females in a rapidly changing market means that Career Education can truly be a co-educational experience, and career preparation and career choices can be based on a student's individual needs, attitudes, interests and abilities, rather than on sex-role differentiation and societal discrimination.

In Retrospect

Validation

Over a three-year period, Cogent Associates of Princeton, New Jersey developed, field-tested and evaluated Project HEAR's curricular interventions. In May 1975, a U. S. Office of Education Validation Team validated Project HEAR as a program which has achieved statistically and educationally significant results in the attainment of its goals, proved cost effective and is exportable.

Goals

Project HEAR's goals, by school level, are:

1. Elementary school students who participate in

the program will show a significant change in attitudes towards the world of work as evidenced by

a. a change in perception of occupational stereotypes

b. a change in preference for sex asynchronic occupations; that is, occupations in which men/women outnumber each other by a ratio of 2:1

than a matching control group at the $\underline{a}$=.05 level as measured by an instrument uniquely designed for Project HEAR.

2. Middle school students who participate in the program will demonstrate a significant increase in knowledge of the world of work than a matching control group at the $\underline{a}$=.05 level as measured by an instrument uniquely designed for Project HEAR.

3. Secondary school students who participate in the program will demonstrate a significant increase in consistency of occupational preference with occupational interest than a matching control group at the $\underline{a}$=.05 level as measured by an instrument uniquely designed for Project HEAR.

Field Test Background Information

During Project HEAR's three years of development, the curriculum was field tested in 13 New Jersey school districts with approximately 3,000 students using the program.

National validation in 1975 was based on field test results obtained during Project HEAR's third year of development.

At the elementary level, Project HEAR's Primary Learning Unit was

evaluated on a selected sample of 44 experimental 4th grade students. The control sample size was 45 4th grade students. The 4th grade experimental and control populations were drawn from the Livingston School District, the East Orange School District, and the Montclair School District.

At the intermediate level, Project HEAR's Intermediate Learning Unit was evaluated on a selected sample of 8th grade students. The control sample size was 42 8th grade students. The 8th grade experimental and control populations were drawn from the West Essex School District, East Orange, Livingston and the Montclair School District.

At the secondary level, Project HEAR's Secondary Learning Unit was evaluated on a selected sample of 82 experimental 12th grade students. The control sample size was 29 12th grade students. The 12th grade experimental and control populations were drawn from the Paramus School District, the North Brunswick School District, the East Orange School District and the Montclair School District.

Field Test Demography

Livingston is a suburban community in Essex County, New Jersey. The public school enrollment is approximately 7,363 students. Approximately 97% of the families in Livingston are white and earn an average of $15,000-$20,000 per year.

North Brunswick is a suburban community in Middlesex County, New Jersey. The 12th grade enrollment is 165 students. Approximately 99% of the families in North Brunswick are white and earn an average of $15,000-$20,000 per year.

East Orange is an urban community closely situated to Newark, New Jersey in Essex County, New Jersey. The sample population came from schools where the enrollment is: 4th grade - 75 students, 8th grade - 348 students, 12th grade - 447 students. The public school population in East Orange is approximately 95% black and 5% white. The average family income is between $5,000-$10,000 per year.

Paramus is a suburban community in Bergen County, New Jersey. The public school enrollment is approximately 6,315 students. Approximately 99% of the families in Paramus are white, and over 70% of the population earn between $10,000-$20,000 per year.

Montclair is a suburban community in Essex County, New Jersey. The control sample population came from schools where the enrollment is: 4th grade - 32 students, 8th grade - 135 students, 12th grade - 589 students. The public school population is approximately 34% black, and 66% white. The average family income is between $15,000-$20,000 per year.

Evaluation Design

The experimental design is a pre-post experimental to control group contrast for all three objectives which were measured.

Three evaluation instruments were developed to measure the learner outcomes. Detailed descriptions of the evaluation designs and statistical treatment and results pertaining thereto are available upon request. A brief description of the design and results are as follows:

Evaluation Results

Change in Occupational Stereotypes

Primary Students (grades 4-6)

The experimental hypothesis was that the increase in perception of the bisexuality of occupations would be significantly greater for experimental Ss than for control Ss over the same time interval.

The project objective was to change traditional sex-linked stereotypes so that more occupations would be perceived as bisexual than are so identified traditionally. Attainment of the objective can be attributed to the project intervention because the experimental Ss showed a significantly greater increase in the mean number of occupations perceived as bisexual than did a matching control group over the same time interval. The experimental and control groups

were selected on a matched group basis and both groups received the regular school curriculum during the treatment period. On the basis of the statistical and supportive evidence, Project HEAR had a highly significant effect in changing the occupational stereotypes of elementary school students who participated in Project HEAR.

Change in Preference for Sex Asynchronic Occupations

Primary Students (grades 4-6)

The experimental hypothesis was that the observed mean increase in preference for sex-asynchronic occupations would be significantly greater for experimental Ss than for control Ss over the same time interval.

The project objective was to increase preference for sex-asynchronic occupations; that is, for occupations traditionally employing members of the opposite sex. Some occupations employ significantly more males than females, and are considered masculine occupations. (These would be sex-asynchronic for females.) The thrust of the program was toward breaking down these traditional sex-linked occupational stereotypes, so that girls would like masculine occupations and boys would like feminine occupations. Attainment of the project objective can be attributed to program intervention because experimental Ss showed a significantly greater increase in preference for sex-asnynchronic occupations than did a matching control group over the same time interval. Both groups received the regular school curriculum during the treatment period.

Increase in Knowledge of the World of Work

Intermediate Students (grades 7-9)

The experimental hypothesis was that the increase in scores on a test of occupational information would be significantly greater for experimental Ss than for control Ss over the same time interval.

The objective was obtained at a criterion level above that established for the objective. Attainment of an increase in

knowledge of the world of work can be attributed to the project intervention because the experimental Ss showed a significantly greater increase in scores on a test of occupational information than did a matching group over the same time interval. Both groups received the regular school curriculum during the treatment period.

Increase in Consistency of Occupational Preference with Occupational Interest

Secondary Students (grades 10-12)

The experimental hypothesis was that the increase in consistency of preference and interests would be significantly greater for experimental Ss than for control Ss over the same interval.

The objective was obtained at a criterion level above that established for the objective. Attainment of the objective can be attributed to the project intervention because experimental Ss showed a significantly greater increase in the number of consistent preferences than did a matching group over the same time interval. Both groups received the regular school curriculum during the treatment period.

Spinoff Findings

The experimental population on the secondary level has demonstrated two educationally significant program effects:

The Project HEAR test instrument indicates that:

1. Twelfth grade males tend to have well-crystallized and clarified values. Those values which were rated most important were economic stability and independence. Female values before the program intervention were less crystallized and clarified. After the program intervention, there is evidence of a definite programmatic effect toward greater value clarification.

2. Increased consistency of occupational preference and student estimates of abilities and aptitudes will result in more realistic levels of aspiration.

In a statistical assessment of a variable directly related to consistency of preference with estimated ability, black and white students show different patterns of response.

Although the program did not achieve a significant level of improvement in consistency in this area, it did show a trend in this direction. Upon examination, the patterns of estimation; that is, a tendency to under-estimate, correctly estimate, or over-estimate, there is a tendency for white subjects to over-estimate--to have an unreasonable high level of aspiration. There is a tendency for black students to under-estimate--to have an unreasonably low level of aspiration. The program tends to move in the direction of increased consistency for both groups.

The conclusions reached on the basis of the evaluation, and validated by the U. S. Office of Education Validation Team, were that Project HEAR had a highly significant effect:

- o in changing the occupational stereotypes of participating elementary students;
- o in increasing preferences for sex-asynchronic occupations for participating elementary school students;
- o in increasing knowledge of the world of work for participating middle school students; and
- o in increasing the consistency of occupational preference with interests for participating secondary school students.

In Adoption

Essential Elements

The essential elements of the Program are three multimedia packaged learning units.

Primary Learning Unit

Contained in the Primary Learning Unit are the following:

A. 30 consumable individual Student Workbooks, "Whatcha Gonna Be?", designed to give students knowledge about self, the world

of work, and decision-making skills.

B. A Teacher's Manual designed to give teachers a rationale for HEAR's curriculum, the philosophy, the learning sequence, an explanation of each activity contained in the Student Workbook, plus additional suggested activities and discussion topics.

C. 30 non-consumable, individual 'Storybooks' containing two original fiction short stories, "Everybody Gets Scared Sometimes," and "Dreams Sometimes Have to Wait." These stories are intended to portray men and women in realistic alternative role models; to expose students to a variety of occupations; and to promote discussion about feelings, emotions and the affirmation of a positive self image.

D. A cartooned film-strip and accompanying cassette, "What Can I Be?", intended to encourage students to view traditionally stereotyped occupational roles as suitable for both men and women

E. A set of 30 slides, "Images", to be used in conjunction with those sections of the Student Workbook concerned with self-exploration and the exploration of the world of work.

Intermediate Learning Unit

Contained in the Intermediate Learning Unit are the following:

A. 30 consumable individual Student Workbooks, "Whatcha Gonna Do?", designed to give students knowledge about self, the world of work and decision-making skills.

B. A Teacher's Manual to serve the same purposes outlined for the Primary Learning Unit.

C. 30 nonconsumable individual Storybooks, "A Couple of Compendious Vignettes or Two Short Stories". Two original fiction short stories, "What Do You Do at the Hospital,

Mom?" and "The Missing Link" are contained in the storybook. These stories are used in conjunction with the student workbook section on the world of work. They focus on the occupational fields of Health and Government and on 18 occupations within those fields which are projected to expand over the next ten years. Special care has been taken to ensure the non-stereotypic portrayal of the characters.

D. "Images" is included in this unit with an additional 18 slides picturing 18 persons performing non-stereotyped occupations.

E. An instructional simulation card game, "HEAR's Careers", designed to give students information about the education and/or training requirements for a selected set of careers; the differences and relative degrees of difficulty for males and females in achieving those careers. Career Record Sheets are included with the game.

F. 30 nonconsumable individual legal rights brochures entitled, "A Guide For Women: The Law & Employment," designed to acquaint young women with their rights and responsibilities in the world of work.

Secondary Learning Unit

Contained in the Secondary Learning Unit are the following:

A. 30 consumable individual student workbooks, "Working It Out" designed in a self-teaching response-reinforcement format. Students move from an exploration of self-awareness, into an exploration of social awareness, concluding with experiences in decision-making.

B. A Teacher's Manual to serve the same purposes as outlined for the Primary Learning Unit.

C. A cartooned filmstrip, and accompanying cassette, "The Dreamer," designed to acquaint students with the concept that any decision relating to occupational choice is directly correlated with and only begun with, knowledge about self.

D. A manual key-sort, "Occupational Resource Card System," containing 850 occupations derived from the ten occupational classifications of the Dictionary of Occupational Titles. Each occupation is coded according to 18 variables of occupational characteristics. In the process of using the system, the student acquires both the specific occupational information and practice in establishing priorities among job-related variables.

E. 30 nonconsumable individual legal rights brochures, "A Guide For Women: The Law & Employment," designed to acquaint young women with their rights and responsibilities in the world of work.

Implementation

Project HEAR's materials have all been revised to reflect feedback from students and teachers and also to reflect the most current occupational statistics and information.

Attainment of the sequentialized grade level objectives is achieved by implementing the program for 35 classroom sessions (35-40 minutes per session) within a 45 day period.

Project HEAR is ungraded and designed for use in any existing classroom structure, within any discipline and adaptable to multiple learning needs.

The Project HEAR curriculum may be used in three alternative

formats.

1. A school district may choose to implement the program at the primary level for year I and then in the second and third years adopt the Intermediate and Secondary Learning Units.
2. A school district may choose to implement the program at the intermediate level for year I and then in the second year adopt the Secondary Learning Unit.
3. A school district may choose to implement only the Primary, Intermediate or Secondary Learning Units with no further commitment to the Project.

A school district may adopt any combination of the three learning units at any point in time. No unit assumes the use of an earlier unit

Commitment

Sex role stereotyping limits career choices. Adopters of Project HEAR need to be aware that the limits imposed by differentiation and discrimination affect them and their students. Adoption of Project HEAR requires a commitment to expanding options rather than limiting them.

HEAR's curriculum is highly exportable and is so designed that teacher/administrator training in the successful implementation of the materials is minimal. Three years of evaluation data strongly indicate that HEAR adopters need to be aware of and sensitive to the broad implications of sexism. The Project staff provides adopting districts with individually designed seminars which will address the specific needs of the district personnel, and which will facilitate successful implementation of Project HEAR.

Costs

Training

The costs of adopting Project HEAR's Learning Units by a school district are those associated with staff training and the purchase of Project HEAR materials.

District needs determine the number of training seminars, as well as the scope, content and format of the training design. There is no cost to New Jersey adopters for training services which are provided by the Project staff.

Adopters of HEAR need to provide release time for staff in training and facilities in which the design can be implemented.

Materials

For 1976-1977, the Primary Learning Unit is priced at $59.45, the Intermediate Learning Unit is priced at $56.08, and the Secondary Learning Unit costs $86.24. Ten percent (10%) above cost is required for shipping and handling of all curriculum units which include materials for 30 students and a teacher. Continuing use of Project HEAR requires the replacement of the Student Workbook--the only consumable product in the curriculum.

In Dissemination

Demonstration Sites

Project HEAR staff has provided for visitors to observe the Project in use at two demonstration sites in New Jersey.

East Orange Board of Education was selected by the Project staff because it is an urban center in northern New Jersey which used Project HEAR during the field test period. Visitors to the East Orange school district can observe the Primary and Intermediate levels in use. Willingboro Township Board of Education has been selected as the second demonstration district by the Project staff because it is a

a large suburban district with urban characteristics in southern New Jersey. Visitors to the Willingboro Township school district can observe all three curriculum components in use.

Consumer Services

During the dissemination phase, Cogent Associates will be responsible for managing all marketing, training, processing and delivery functions. The Project staff has prepared two mailers for potential adopters. Presentations relating to HEAR's philosophy, history and program will be arranged for school personnel who are considering the adoption of Project HEAR.

During the adoption period, Project HEAR staff will provide consultation and follow-up services with teachers, students, administrators, parents, Boards of Education, and community members. Seminars may be arranged with special interest groups and Cogent Associates will provide Affirmative Action planning for school districts wishing such consultation.

Schedules will be established at Demonstration Sites for visitations to classrooms and meetings with district personnel. Materials will be available for inspection and conferences arranged with the Project staff at the offices of Cogent Associates in Princeton.

In Conclusion

Project HEAR is a unique program in career education offering each student opportunities to grow, change and expand awarenesses in a myriad of ways. All Project HEAR materials are non-sexist, ungraded, skill-building, student-centered, sequentially organized, experiential, creative and fun.

HEAR's purpose is to both present students with meaningful and realistic exploration of the world of work and to remove myths and stereotypes from career choice.

HEAR provides the opportunity for females, as well as males, to take responsibility for self and for the formulation of life plans, goals and aspirations through the acquisition of decision-making skills.

HEAR aims to broaden the range of acceptable male/female concepts in order that any life work based in fantasy can move from the stage of exploratory behavior into the stage of implemented behavior.

Students are the focus of all Project HEAR's activities. HEAR's materials and experiences provide each learner with effective career development concepts, behaviors and skills in order to enable the student to find meaning as a functioning, productive, satisfied member of society through personal accomplishments.

HEAR offers an alternative conception of career choice as part of the life-long process of personal growth. If career education continues to promote the same limited career options for girls that are presently open to women, it will be useless to one-half of the students to whom it is offered.

If our schools can play an important role in enabling our young men and women to expand their own self-concepts and to dispel the sex-role mythology which presently surrounds occupations, then each individual therefore has potentially greater options available and in turn, the labor market then has full use of both male and female potential.

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